User Manual

（AVT-3000 GPS/GSM Vehicle Tracker）

V 2.0

1 Prelude

1.1 Brief Introduction

The AVT-3000 GPS/GSM Vehicle Tracker combines GSM & GPS technology perfectly, owns compact size and elegant appearance, and carries top technology style. It is the typical model of the combination of communication products and GPS/GSM Vehicle Tracker.

This product shows advanced technology strength in GSM & GPS field. As a professional security and locating company, we will provide you more and better products and service.

Before you use it, please spend some time to read this guide to know the operation details, so as to get better service.

1.2 Caution

1.2.1 Please read this handbook carefully and operate in right way, to avoid anything wrong;

1.2.2 You need to choose a safe place to install your product, some dangerous places such as car airbag, and somewhere easy to hit driver or passengers when there is an accident, are all unsuitable to place products. Besides, please don't operate it when driving, to avoid unnecessary accidents.

1.2.3 The introduction in this book is just for your reference, if some of the content or operating procedures are different from the real products, please follow the products. If you have any questions please visit our Web site.

2 About the device

The AVT-3000 GPS/GSM Tracker is a vehicle remote position device with build-in GPS and GSM/GPRS modules. It is a small size, high accuracy remote location tracking device. Based on GPS satellite, it provides accurate position information under dynamic conditions. Personal remote position device transmit the longitude and latitude coordinate to authorized cell phone.

Applications

- AVT-3000 GPS/GSM vehicle tracker mainly uses for motorcycle, electric golf cars, and ordinary car. The devices built in antenna, integrative machine and easy to assemble.
- You can use these features for a security purpose and other purpose which needs remote positioning such as asset protection and tracking.

2.1 Components

2.2 Features

1. Support GSM 850/900/1800/1900 MHz. Works worldwide!
2. High sensitivity, SIRF Star Ⅲ low power GPS chipset!
3. Excellent for fixing the position even at a weak signal status, work well even in areas with limited sky view like urban canyons
4. Fast Signal Acquisition
5. Support single location and continuous tracking
6. Support alarm, have 3 preset phone number
7. Support check location and real-time and historical trajectory by SMS or Internet
8. SOS button send out exact location for immediate rescue/action.
9. Support cut-off electricity and oil function and recovery command
10. High reliability circuit design, in line with the automotive electronics industry standards

2.3 Specification

GSM module	MTK program, GSM 900/1800/850/1900 dual-band or quad-band Support the TCP protocol
GPS Chipset	SIRF-Star III chipset
GPS sensitivity	-159dB
C/A Code	1.023MHz chip rate

Channels	20 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	10 meters, 2D RMS
GSM Position Accuracy	Later will realize
Velocity Accuracy	0.1m/s
Time Accuracy	Synchronized to GPS time
Default datum	WGS-84
Hot start	1sec.,average
Warm start	38sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g

2.4 Others

Operating temperature	-20°C－65°C
Humidity	5%To 95% Non-condensing
Dimension	88mm×46mm×18mm
Voltage	12V
Average Current When stand-by	<84mA
LED	Green/ Blue/ Red LED showing GPS、GSM and power status
Out set SOS Key	One SOS emergency key: for urgent call

2.5 LED State Description

Blue LED--- indicate the GSM signal state

State	Means
constant Lighting	no SIM card or not GSM net
flashlight once interval 8s	GSM receiver work well and standby
flash quickly	voice calls or in GSM connection

Red LED---indicate charge sate

State	Means
constant Lighting	charging
No light	charging was completed

Green LED--- indicate the GPS signal state

State	Means
constant Lighting	Working, but no location
Flashing	Working and has located

3 Get Started

3.1 Products

1）AVT-3000 GPS/GSM Vehicle Tracker

2）Power cable

3）Battery

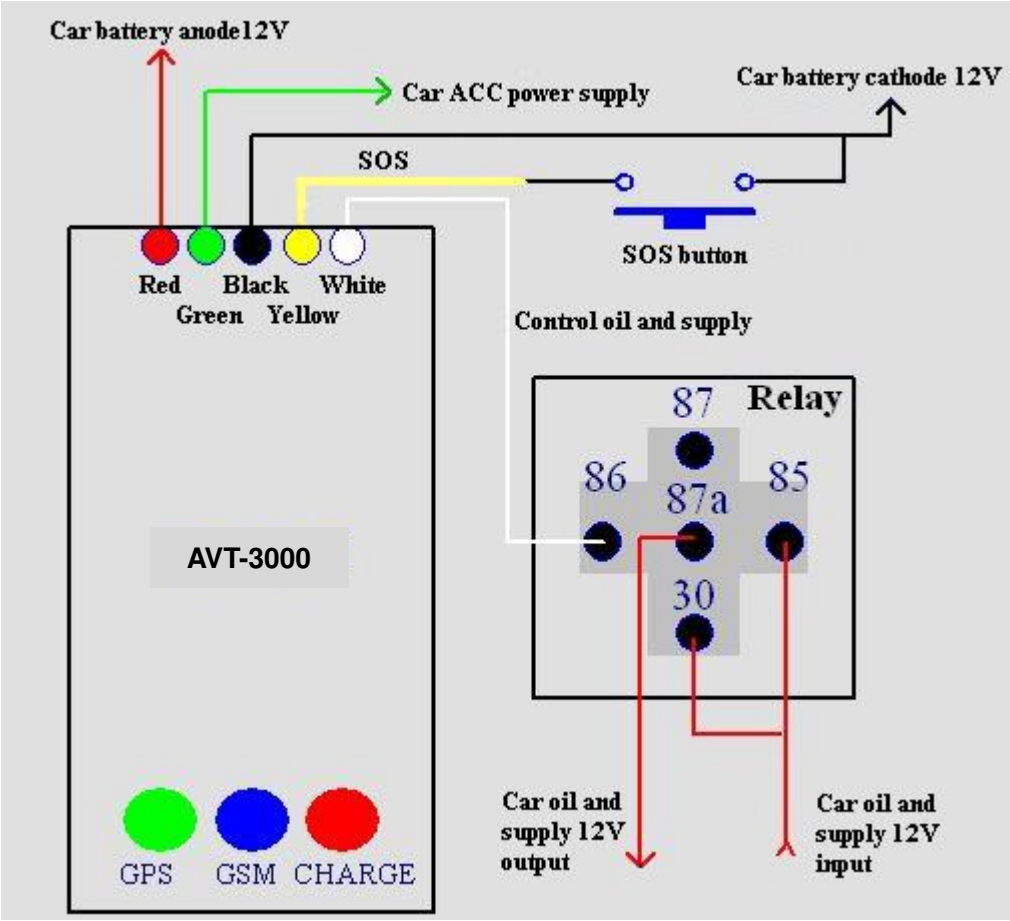
3.2 Install SIM Card

3.2.1 Draw out the rear cover, there is a slot for SIM card. Then push the card into the slot until it fully inlays, and ensure that it locks well.

3.2.2 Select SIM card

- You can use GSM card from Local Mobile.
- Make sure enough deposit in the SIM card, and support SMS/GPRS function.

3.3 Wiring diagram:

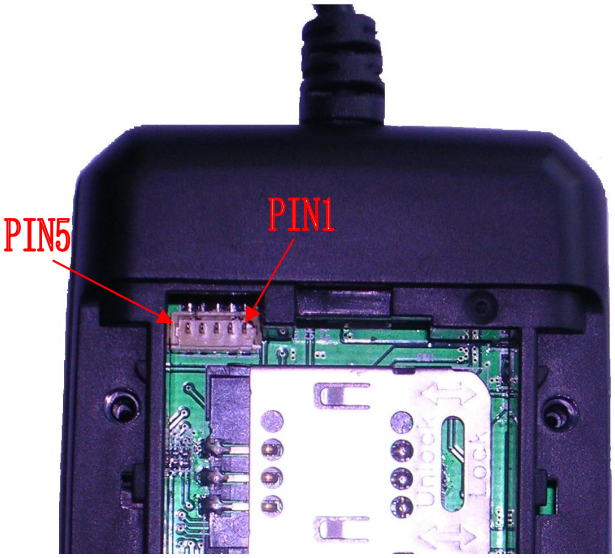


The external 5 wires of AVT-3000 GPS/GSM tracker are as follows. Red for the 12V car power wire, connect to the car battery anode; Black for the earth GND, connect to the car battery cathode; Yellow for the SOS for help Control wire, connect external SOS switch button to car battery cathode; Green wire connect ACC car power supply, that is, with the car CD, radio, and other automotive electrical appliances in parallel. When the vehicle key puts in the ACC gear, the green line will examine the 12v voltage, the terminal will open the charge function automatically. White for cut-off oil and power control wire, connect to the relay coil 86, i.e. one end. Relay 85, i.e. anther end connects to oil and power supply 12V. 30, 87a are normal closed-end, series in the oil and power supply circuit. Please note that if the installation of lead wire is right, if errors installation led to the equipment damage, At Own Risk, the company is not responsible for it.

3.4 Reset:

Under the shutdown state, short circuit PIN3 and PIN4 of 5pin socket in the back of AVT-3000 shell, then connect the built-in battery or external power supply, 5 seconds after boot disconnect

PIN3 and PIN4.



List of reset state:

Configuration	State
Working Mode	Unchanged
Pre-set phone numbers	None
User passwords	0000
GPS	Open
Send regularly location information	Off
The number of return to base stations	1
Calling switch	Open
Electronic fence	Close
GPRS services password	0000
GPRS user name	V300Q
APN	CMNET
IP address	0.0.0.0 0000
GPRS data upload	close
Alarm when cut off power	Open

4 Functions & Operation

4.1 Position service based on SMS operation

In this mode, AVT-3000 can be stored three preset telephone numbers (1, 2, and 3) and a

4-digit user password. The related configuration content that users set by SMS order is non-volatile. After the success, the state has not affect by switching power, until once again receives the relevant instructions or reset operation to change.

4.1.1 Power on

Put on the batteries, connect with the power, product will automatically open.

4.1.2 Switch the mode instruction

Format：70X+ user password (4 figures)

Note: X=(0,1), when X=0, the module is set to be P2P mode(SM mode), when X=1, it is set to be P2S Mode(service center mode)

eg: 7000000

Explanation：When AVT-3000 tracker receives the SMS and confirms the user password correctly, it switches to the SMS application mode. After the success, it will send the confirmation messages (SET MODE OK, CURRENT MODE: SMS P2P) to the sender.

4.1.3 Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When AVT-3000 tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

4.1.4 Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When AVT-3000 tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

4.1.5 GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

4.1.5.1 Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

4.1.5.2 Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

4.1.5.3 Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

4.1.6 Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: **ERROR GPS GPRMC FRAME DATA**

BS: 27971054"

ID: 353686009002030

STATE: SMS

4.1.7 Send the positional information in fixed time instruction

Format: 4 xx + user password (4 figures)

eg: 4010000

Explanation: x indicates one figure from 0 to 9, while "xx <60", its unit is minute. while "xx >60", its numerical value is "xx minus 60" and unit is hour, in other words, 61 is 1 hour, 62 is 2 hours, followed by analogy. When AVT-3000 tracker receives the instruction and confirms the user password correctly, it establishes the current time for initial timing time, xx is the gap time, and sends the confirmation SMS to the sender's mobile phone (TIMER START, REPEAT INTERVAL :< X>MINUTES). Then start to time and send the format as 4.1.6 setting information when it arrives the gap time, the information state item automatically updates **STATE: TIMER. When "xx=00"**, cancels the positional information in fixed time instruction, and sends the confirmation SMS to the sender's mobile phone **"TIMER STOP"**.

4.1.8 Calling switch instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When AVT-3000 tracker receives the instruction to close calling and confirms the

user password correctly, close the calling function (including the SOS, alarm when across the fence, and alarm when cut off power), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When AVT-3000 receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

4.1.9 Telephone localization function

Explanation: One of 3 telephone numbers stored in advance calls in, and hangs up after ringing 2-5 times, then the AVT-3000 will send the location information to this number such as 4.1.6 to this number, the information state item automatically updates STATE: CALL. But other incoming numbers will automatically hang up.

4.1.10 Seeking help initiatively

When press the key more than 3 seconds, it will send the location information such as 4.1.6 to 3 telephone numbers stored in advance, the information state item automatically updates STATE: SOS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

4.1.11 Electronic fence function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the AVT-3000 beyond the scope of the set fence, it will send location information as to 4.1.6 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the AVT-3000 re-enters the fenced area, it will immediately send location information format 4.1.6 to the three preset numbers. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

3) close the electronic fence: 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

4.1.12 Cut-off electricity and oil function

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity. After completion, send confirmation message "POWER OFF OK" to the user.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will output high level in order to control the outside relay to recovery oil and electricity. After

completion, send confirmation message "POWER ON OK" to the user.

4.1.13 Alarm when cut off power function

1. Armament command: 011 + user password

eg: 0110000

2. Disarmament command: 010+user password

eg: 0100000

Description: When the AVT-3000 receives the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON", into the armament state after 10 seconds. When the main external power supply was illegally cut off, the AVT-3000 will automatically send the current location information format as 4.1.6 to the 3 preset numbers, STATE items for: DEF. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. When the AVT-3000 receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. AVT-3000 is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the preset number.

4.1.14 ACC detect charge function

Description: AVT-3000 using ACC detect line achieve car battery charge the AVT-3000 built-in battery when driving, stop charging when parking.

4.1.15 Low voltage warning

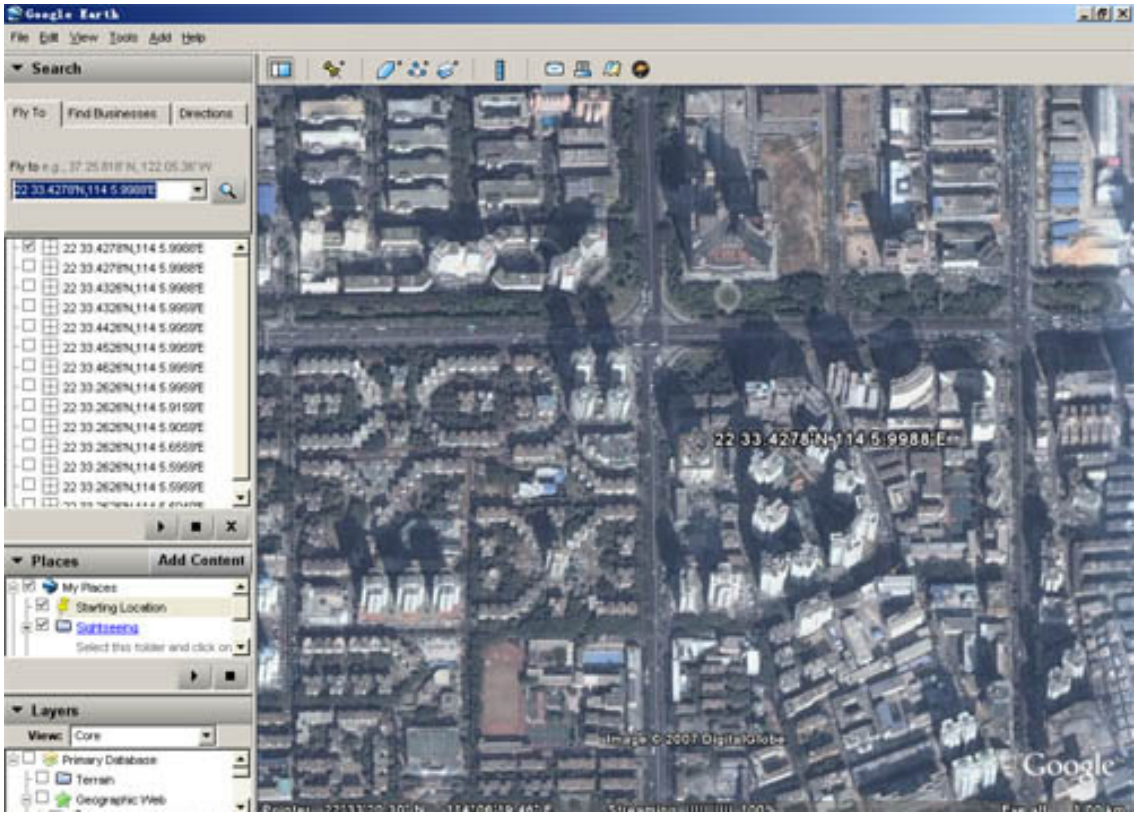
When the AVT-3000's working voltage lower than the set, to read the GPS information, whether or not effective, immediately send the format as 4.1.6 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times, each time one minute interval.

4.1.16 Display the location on map

1) Download Google earth software from http://earth.google.com

2) Start the Google earth software. (For more information about Google earth software, please refer tohttp://earth.google.com)

As following picture shows:



(Note: pay attention to change the position date format)

Or you can start the internet explorer and copy http://maps.google.com to connect to Google map website for displaying the location map.

3）You can get the latitude & longitude date by sending “666+password” SMS command code to the GPS tracker AVT-3000. Input the latitude and longitude that you receive from SMS and click on search button, the Google earth will display the location map for you.

eg： You receive the information from the tracker. As follows:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

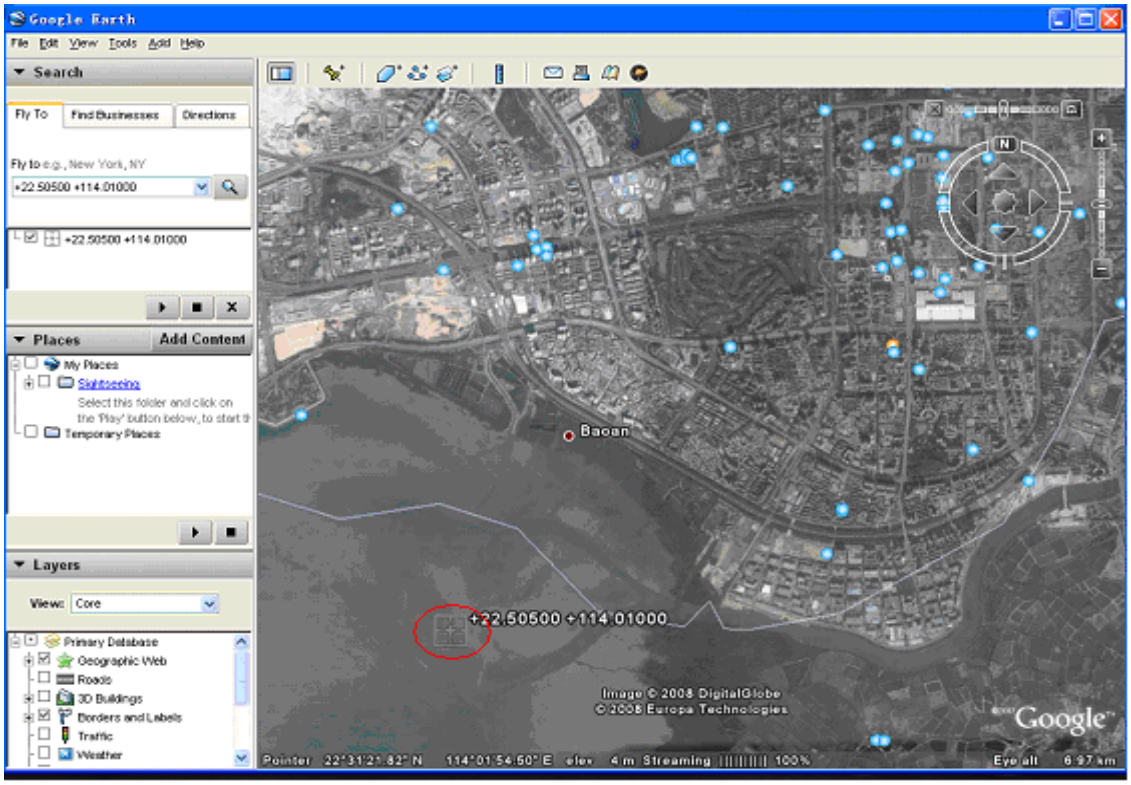
ID: 353686009002030

STATE: SMS

Search the position on the Google map, in relevant position input：

+22.50500 +114.01000

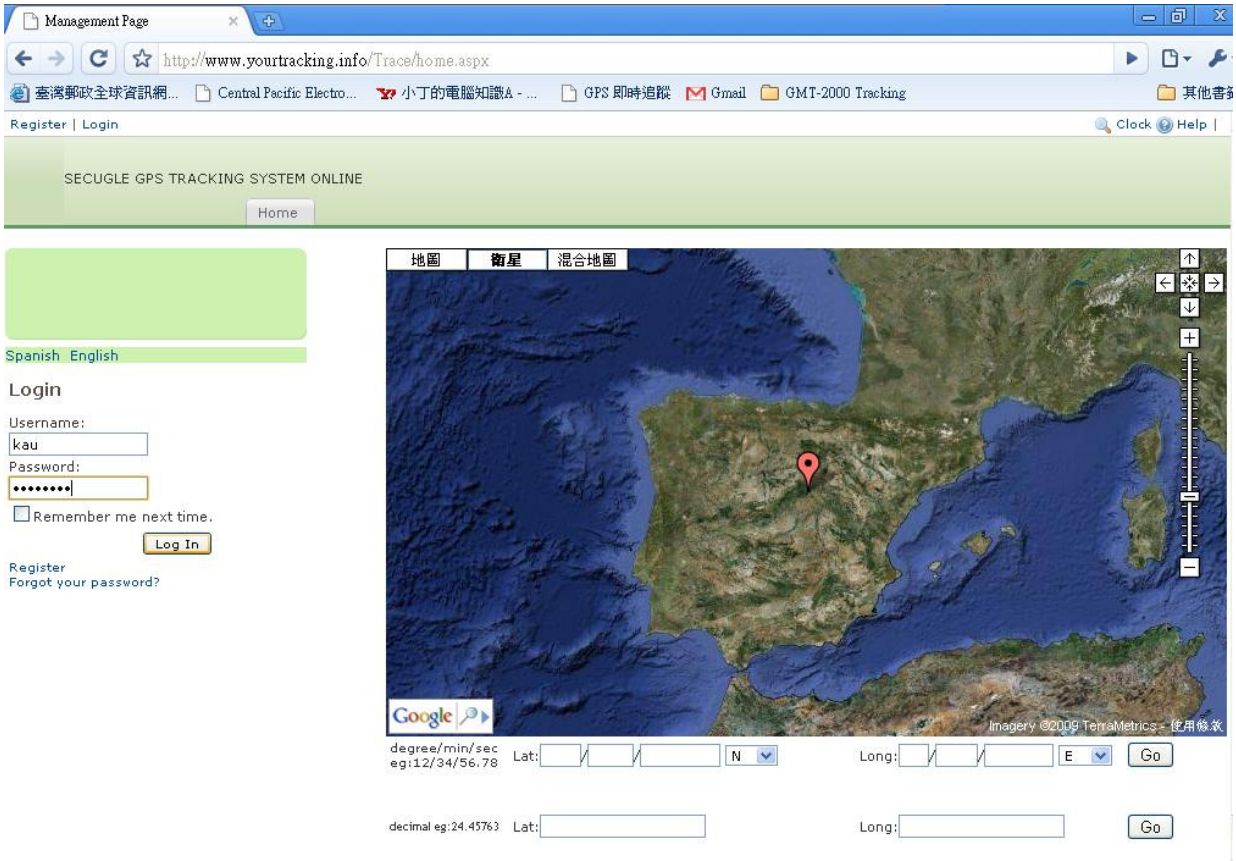
Obtain the following picture:



Or you can use local map software on PDA or car navigation device, input the position date. (*Note:* pay attention to change the position date format)

4.1.17 Display the location on map bye web server via GPRS:

Please visit http://www.yourtracking.info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http://www.yourtracking.info/Trace/home.aspx
Register | Login
Clock Help |
SECUGLE GPS TRACKING SYSTEM ONLINE
Home
Spanish English
Login
Username:
kau
Password:
Remember me next time.
Log In
Register
Forgot your password?
地圖 衛星 混合地圖
Google
Imagery ©2009 TerraMetrics - 使用條款
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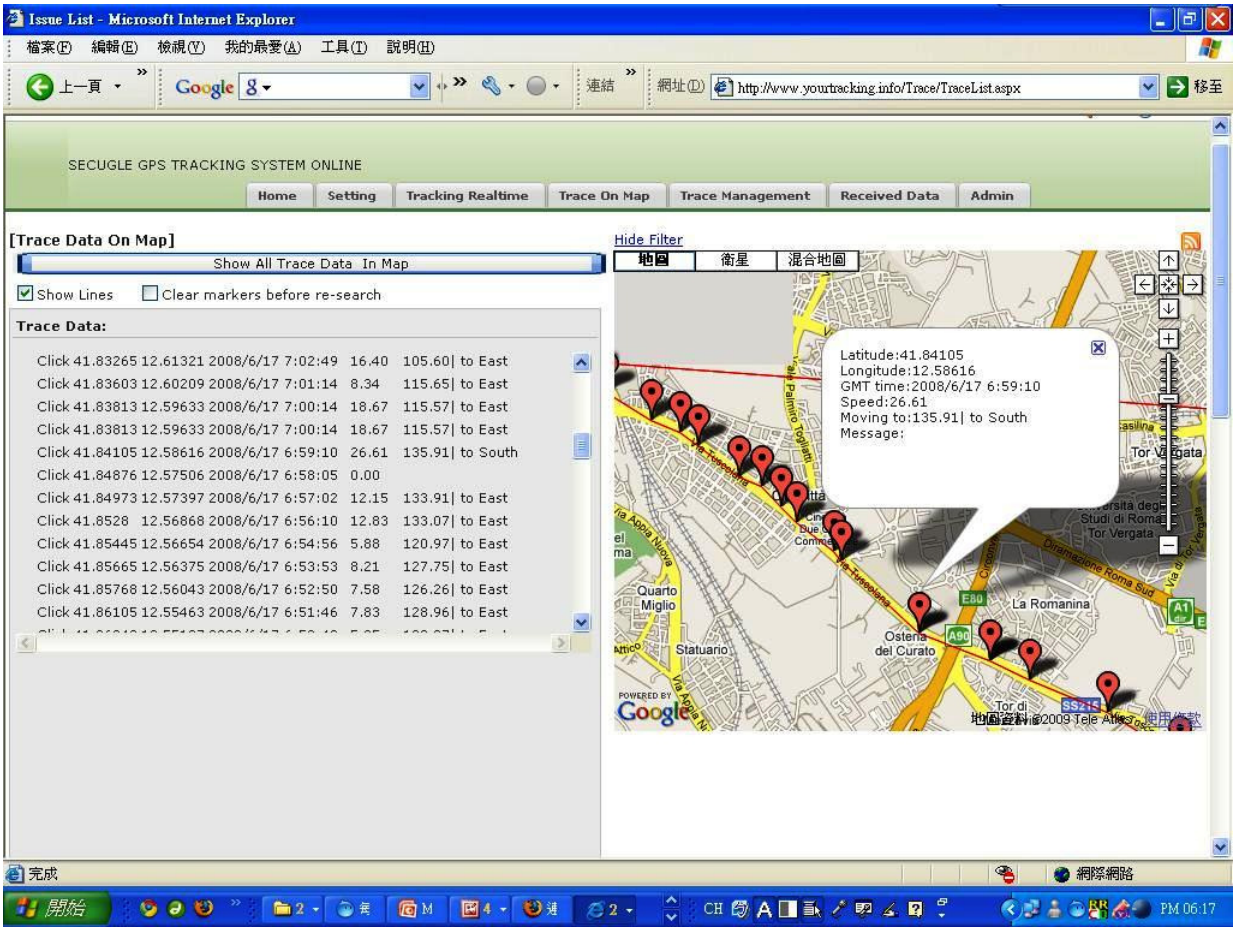
Long:
Go


Issue List - Microsoft Internet Explorer
檔案(F) 編輯(E) 檢視(V) 我的最愛(A) 工具(T) 說明(H)
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SECUGLE GPS TRACKING SYSTEM ONLINE
Home
Setting
Tracking Realtime
Trace On Map
Trace Management
Received Data
Admin
[Trace Data On Map]
Show All Trace Data In Map
Show Lines
Clear markers before re-search
Trace Data:
Click 41.83265 12.61321 2008/6/17 7:02:49 16.40 105.60| to East
Click 41.83603 12.60209 2008/6/17 7:01:14 8.34 115.65| to East
Click 41.83813 12.59633 2008/6/17 7:00:14 18.67 115.57| to East
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Click 41.84105 12.58616 2008/6/17 6:59:10 26.61 135.91| to South
Click 41.84876 12.57506 2008/6/17 6:58:05 0.00
Click 41.84973 12.57397 2008/6/17 6:57:02 12.15 133.91| to East
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Click 41.85445 12.56654 2008/6/17 6:54:56 5.88 120.97| to East
Click 41.85665 12.56375 2008/6/17 6:53:53 8.21 127.75| to East
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地圖 衛星 混合地圖
Latitude:41.84105
Longitude:12.58616
GMT time:2008/6/17 6:59:10
Speed:26.61
Moving to:135.91| to South
Message:
Quarto Miglio
Statuario
Ostena del Curato
La Romanina
Tor Vergata
Google
完成
網際網路
開始
PM 06:17

4.2 The operation based on the GPRS application

In this mode, AVT-3000 can be stored three preset telephone numbers (1, 2, and 3), a 4-digit user password, a group of TCP / IP server IP address and port number, 4-digit GPS password and access point name of GPRS. The related configuration content that users set by SMS order is non-volatile. After the success, the state has not affect by switching power, until once again receives the relevant instructions or reset operation to change.

4.2.1 Switch the mode instruction

Format：710+ user password (4 figures)

eg：7100000

Explanation: When AVT-3000 tracker receives the SMS and confirms the user password correctly, it switches to the GPRS application mode. After the success, it will send the confirmation messages (SET MODE OK，CURRENT MODE：GPRS) to the sender.

4.2.2 Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: Confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

4.2.3 Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When AVT-3000 tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER（1-3） OK) to the sender.

4.2.4 GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command.

GPS state is open after factory settings or reset.

4.2.4.1 Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

4.2.4.2 Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

4.2.4.3 Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

4.2.5 Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password

correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information

Eg: ERROR GPS GPRMC FRAME DATA

BS: 27971054

ID: 353686009002030

STATE: SMS

4.2.6 Change the user name

Format: #801#user password#new user name##

eg：#801#0000# username##

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, changes the user name to the new user name. After the success, it will send the confirmation messages to the sender. The content is “CHANGE USERNAME OK”.

4.2.7 Change the service password

Format：#802#user password#new service password#old service password ##

eg：#802#0000#1111#0000##

Explanation: When AVT-3000 tracker receives the instruction, confirms the user password and old service password correctly, changes the service password to the new service password. After the success, it will send the confirmation messages to the sender. The content is “CHANGE PASSWORD OK”

4.2.8 Set up the access point name of GPRS

Format1：#803#user password#APN##

eg：#803#0000#CMNET##

Format2：#803#user password#APN#APN user name#APN password ##

Explanation1: Different GSM / GPRS service associations provide different APN, please

according to local service providers to provide the APN to choose format 1 or 2 to use set.

Explanation2: When AVT-3000 tracker receives the instruction and confirms the user password correctly, updates the access point name to the new access point name. After the success, it will send the confirmation messages to the sender. If sent the format 1, the content is “SET GPRS APN OK”; if it is format 2, the content is “SET GPRS ACCOUNT OK”.

Note: APN is CMNET after factory set or reset. APN is characters composed of 3 to 35 letters, numbers, dots (.) underscore (_) and connectors (-). APN user name and user password are respectively characters composed of from 3 to 20 the numbers and letters.

4.2.9 Set up the TCP/IP server and IP’s address and port number

Format：#804#user password#fixed IP address # port ##

eg：#804#0000#222.125.12.32#80##

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, updates the IP address and port number preserved in the module， After the success, it will send the confirmation messages to the sender. The content is “SET SERVER IP AND PORT OK”

4.2.10 Upload the location instruction at once

Format：#806#user password##

eg：#806#0000##

Explanation: When AVT-3000 tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is “START GPRS UPLOAD”. At the same time, send the data from the memory block to server.

Upload format:

#IMEI # user name #service password #condition

data quantity #the base station’s information $ GPRMC…….. # the base station’s information $ GPRMC…….

eg:

#123456789000001#AVT-3000#0000#SMS#3

#25ee0dff$GPRMC,083945.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083950.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083955.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E ##

Note: Immediately upload data format for the state: SMS.

4.2.11 Upload data settings

Format：#805#user password# sampling interval T # the number of upload data each time N ##

eg：#805#0000#6#10##

Explanation: The time T unit of the sampling is second, 5 seconds at least，65535 seconds at most；The number of upload data each time is N, at least is 1, at most is 50. Sampling interval T and the number of upload data each time N product should meet greater-than-equal 60, that is T*N≥60.

When setting parameters T * N <60, the device will automatically correct sampling interval T to meet the uploading constraints. When AVT-3000 tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is “SET GPS SAMPLING TIME AND QUANTITY OK”. At the same time as specified in the instructions to the sampling interval time T, continuous read the GPS data and preserve to the memory block. When the memory block reaches to the “number of upload each time N” setting, it starts connecting to the GPRS servers to send out the format as 4.2.10 information, and the state item automatically updates STATE: AUTO. When “the number of upload each time N = 0” it will close the upload data setting and send the confirmation messages to the sender. The content is “GPRS TIMER STOP”。

4.2.12 Calling switch instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When AVT-3000 tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence and alarm when cut off power), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When AVT-3000 receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

4.2.13 Upload the call

Explanation: One of 3 telephone numbers stored in advance calls in, hangs up after ringing 2-5 times. Dispose as 4.2.10， the state item automatically updates STATE: CALL.

4.2.14 Upload the emergency case

Explanation: When press the SOS key more than 3 seconds, it will do like 4.2.10 instruction, the information state item automatically updates STATE: SOS. At the same time, it will call the first preset user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the calling state is off, it will not call the user telephone number, and only send messages to the server.

4.2.15 Electronic fence function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the AVT-3000 beyond the scope of the set fence, it will send location information as to 4.2.10 to the server. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the AVT-3000 re-enters the fenced area, it will immediately send location information format 4.2.10 to the server. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages "SET GEO-FENCE OK" to the sender.

Format2：004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages "SET GEO-FENCE OK" to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages "GEO-FENCE ON" to the sender.

3) close the electronic fence: 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

4.2.16 Cut-off electricity and oil function

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity and back to confirm SMS: POWER OFF OK.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will output high level in order to control the outside relay to recover oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

4.2.17 Alarm when cut off power function

1. Armament command: 011 + user password

eg: 0110000

2. Disarmament command: 010+user password

eg: 0100000

Description: When the AVT-3000 receives the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON”, into the armament state after 10 seconds. When the main external power supply

was illegally cut off, the AVT-3000 will automatically send the current location information format as 4.1.6 to the server, STATE items for: DEF. When the AVT-3000 receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. AVT-3000 is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the server.

4.2.18 ACC detect charge function

Description: AVT-3000 using ACC detect line achieve car battery charge the AVT-3000 built-in battery when driving, stop charging when parking.

4.2.19 Low voltage upload

Explanation: When the AVT-3000's working voltage lower than the set, it will do like 4.2.10 instruction, the data state items automatically add "LP" to aid current status. Send a total of three times, each time one minute interval.

Note：When low voltage, different situation for below condition expression：

upload the call："LPCALL"

Automatically answered："LPANSWER"

Automatically upload："LPAUTO"

Upload the emergency situation："LPSOS"

4. Instruction Set

Instruction	Explanation
700+ user password	SMS Mode
710+ user password	GPRS Mode
011+ user password	Armament in two modes
010+ user password	Disarmament in two modes
003+ user password E/Wdddmm.mmmm N/Sddmm.mmmmRzzz.z	Set the scope of the fence (units of degrees and minutes) in two modes
004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z	Set the scope of the fence (units of degrees) in two modes
100+ user password	Open power-saving function in two modes
150+ user password	Close calling instruction in two modes
151+ user password	Open calling instruction in two modes
211 + user password	Open the electronic fence in two modes
210 + user password	Close the electronic fence in two modes
222+ user password	Open GPS In two modes
333+ user password	Close GPS In two modes
4xx+ user password	Regularly upload in SMS mode
666+ user password	Return single localization to user number in two modes
777+new password + old password	Change user password in two modes
900+ user password	Cut-off electricity and oil in advance function in two modes
901+ user password	Cut-off electricity and oil function in two modes
902+ user password	Cut-off electricity and oil to recovery in advance command in two modes
903+ user password	Cut-off electricity and oil to recovery command in two modes

new numbers user password *location number**	Change the telephone number in advance in two modes
#801#user password # new user name##	Change the user name in GPRS mode
#802#user password # new service password # old service password ##	Change service password in GPRS mode
#803# user password #APN##	Set up access GPRS points in GPRS mode
#803# user password #APN#APN user name# APN password##	Set up access GPRS points in GPRS mode
#804#user password # fixed IP address # port ##	Set up TCP / IP server's IP address and port number in GPRS mode
#805#user password# sampling interval T # the number of upload data each time N##	Upload data set in GPRS mode
#806# user password ##	Upload the current position immediately in GPRS mode
*GTAN# user password##	Read all the current numbers, passwords
*GTAS# user password##	Read current settings